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ABSTRACT

The College of Education and Human Services Professions at the University of Minnesota, Duluth, has undertaken to develop several videodisc programs to be incorporated into the undergraduate core curriculum and inservice education for teachers and human service professionals. "Understanding Groups," which is the initial curriculum disc of the series, contains full modules on shared leadership, group goals and goal structures, group communication, and conflict resolution. An additional module briefly covers group decision making, power in groups, and leadership styles. Each major module includes a pretest and instruction, practice, and application sections, and the videodisc program allows users to learn concepts through either inductive or deductive tracks. The videodisc is the central part of an integrated learning package which also includes learner and instructor manuals and videotaped examples of four different types of groups. A key research component of the project was the front end analysis conducted in preparation for designing "Understanding Groups," which included learner analyses and interviews with subject matter experts. Formative and summative evaluations are also being undertaken to study and improve the effectiveness of the disc. Administrative support and enthusiastic trained individuals capable of teamwork were found to be prerequisites to developing videodiscs in a university setting, as well as funding, human resources, and physical plant resources. (MES)

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Using Videodisc Programs on "Understanding Groups" in a University Setting

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Submitted for Inclusion in the Symposium Proceedings

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ABSTRACT

This paper describes the development, design, and use of an interactive videodisc program on "Understanding Groups" in the College of Education and Human Service Professions at the University of Minnesota, Duluth. The videodisc program itself focuses on shared leadership, group goals, group communication, and conflict resolution as key topics in understanding groups. Each topic includes a pre-test and instruction, practice, and application sections. The videodisc program is unique in that it allows users to learn concepts through either inductive or deductive tracks. The paper describes the design process used in developing the "Understanding Groups" videodisc program, initial information about use and evaluation of the videodisc, and the advantages and disadvantages of designing and producing interactive videodisc programs in a university setting.

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Using Videodisc Programs on "Understanding Groups" in a University Setting

The College of Education and Human Service Professions at the University of Minnesota, Duluth has undertaken an ambitious project to develop a variety of videodisc programs to be incorporated into its core curriculum. "Understanding Groups" is the initial curriculum disc of the series. This paper will describe the background, nature, and uses of the "Understanding Groups" videodisc. It will also describe the research and evaluation activities associated with the discs and what we have learned about developing and using discs in a university setting.

The "Understanding Groups" Videodisc

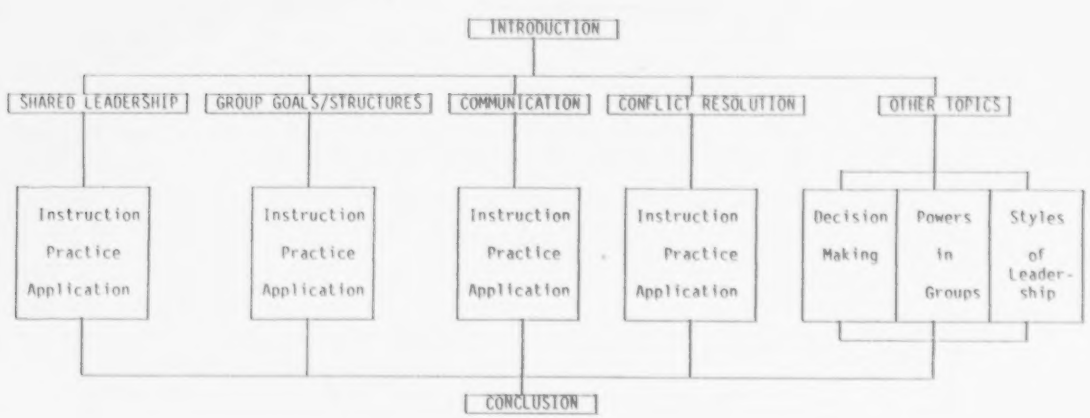
"Understanding Groups" is the first of twenty-one videodisc programs scheduled to be developed by the Center for Advancement of Learning Technologies and used in the College of Education and Human Service Professions. The current program and subsequent discs will be used as part of the undergraduate core curriculum in the College and for inservice education for teachers and other human service professionals. "Understanding Groups" is one of seven discs in a series called Creating Healthy Human Systems. Other discs in this series will focus on understanding and effectively intervening with other social systems, including the individual, the family, organizations, communities, and society. Two other series of seven discs will focus on developing helping skills and on research and statistics competencies necessary for teachers and other human service professionals.

The "Understanding Groups" program contains full modules on shared leadership, group goals and goal structures, group communication, and conflict resolution in groups. An additional module more briefly covers group decision making, power in groups, and leadership styles. Each major module includes a pre-test providing feedback to the student on how they may most effectively go

through the module, an instruction section which introduces key concepts, and a practice section which allows the learner to use the new concepts. Students learn about group behavior through observation of a small group in a collegiate class, a parent education group, a cooperative learning group in an elementary school, an adolescent drug treatment group, and a senior citizen advisory board. In each application section, the learner applies new ideas in a simulated group setting, through serving as a member of a search committee hiring a director in a human service agency.

Based on an extensive learner analysis which indicated students preferred to learn about groups in different ways, the instruction and practice sections both include inductive and deductive tracks. The inductive track allows students to view video segments of group behavior and develop their own theories about the dynamics in the group before receiving an "expert explanation," later comparing their own ideas of those of the expert. The deductive track presents the key concepts and definitions and uses video segments of group behavior as an example of the concept.

Figure 1. Flowchart diagram for interactive videodisc on "Understanding Groups".



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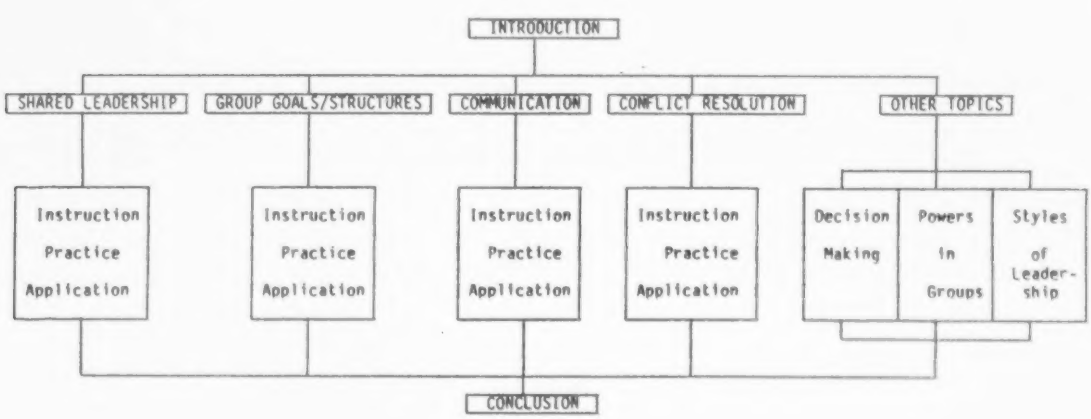

The videodisc is the central part of an integrated learning package. A learner manual includes worksheets to assist the students in observing segments of group behavior and key definitions and other information related to groups. The instructor manual includes alternative ideas for using the disc, group exercises which can be completed in the classroom to provide direct experience using the concepts presented in the disc, and a final evaluation which can be used in conjunction with the videodisc. Approximately two hours of videotapes of four different groups is also available so that students and instructors can have additional examples of a variety of group behavior.

The "Understanding Groups" disc will be used in several classes. Among these classes are an elementary education methods class, an undergraduate social work class on human behavior, and a psychology group dynamics class.

Research and Evaluation

A key research component of the current project was the front end analysis conducted in preparation for designing "Understanding Groups." This process included learner analyses and subject matter expert interviews. Over 100 undergraduate and graduate students were surveyed to determine the extent of their knowledge of group dynamics and the style of learning which best facilitated their learning. The separate inductive and deductive learning tracks, described earlier, were based on the results of this survey. Fifteen college faculty members and human service practitioners were interviewed as subject matter experts to determine the most important topics and best forms of instruction to be used in the videodisc. Content chunks included such topics as task and maintenance functions, communication networks, cooperative and competitive goal structures, and problem solving in conflict situations.

Two types of evaluation are being undertaken to improve and study the

effectiveness of this disc. The first type of research is formative evaluation, that is field testing the disc program to determine how the quality and effectiveness of the disc can be improved. During spring quarter of 1986, approximately thirty undergraduate students and ten faculty members completed all or parts of the disc and identified strengths, such as the attractiveness of observing actual group interaction, and weaknesses, such as the need to specify directions for using the manual. After editing, this type of evaluation will continue for the 1986-87 academic year with larger populations of students and faculty.

The second type of research to be undertaken is summative evaluation, that is determining how effective the disc program is in achieving its goals. The initial research will involve random assignment of students to either an experimental or control group. The experimental group will use the disc as its primary source of information on groups; the control group will be exposed to information by more traditional lecture and discussion formats. The research will focus on the differences between experimental and control groups on criteria such as satisfaction with the learning process, acquisition of knowledge, and group observation skills. The effects of the inductive and deductive learning tracks on observation and group facilitation skills will also be examined.

Videodisc Development in a University Setting
Advantages and Disadvantages

Two prerequisites to developing videodiscs in a university setting are administrative support and a cadre of enthusiastic and trained individuals capable of working as a team on a complicated project. The Dean of the College, who initiated the current videodisc development activities, has removed bureaucratic barriers and secured funding from a variety of sources. Additionally, the chief academic officers at the University of Minnesota, Duluth, have been

supportive of the project since its initiation in May of 1985. The Videodisc Research Group was self-selected among College faculty, and all members had an opportunity to participate in the Nebraska Videodisc Workshop to develop necessary skills related to videodisc development.

Funding, human resources, and physical plant resources are three areas in which the university setting offers both advantages and disadvantages. The University can potentially attract external funding from corporations, foundations, and professional organizations. For example, the College of Education and Human Service Professions has received approximately $400,000 worth of IVIS videodisc equipment from the Digital Equipment Corporation and a $350,000 grant from the McKnight Foundation to underwrite the cost of development and research on videodiscs related to helping skills in the human service professions. In contrast to the external funding, internal funding for clerical assistance and production and mastering costs have been more difficult to obtain during a period of declining resources in higher education.

Human resources are often plentiful and varied in the university. Many faculty members are familiar with instructional design and computer programming. Subject matter experts, video production specialists, and persons with administrative skills are usually present. In contrast, the bureaucratic nature of the University often segregates its faculty and staff in a tight departmental structure. Significant effort was required to allow seven faculty members from five different departments, the computer center staff, and the production staff on the Minneapolis campus (150 miles to the south) to work cooperatively on this project.

Physical plant resources are a third area for consideration. University settings often provide computer facilities, including both micro and main frame

computers and computer networks. Media production studios are often available for the development of instructional materials. Maintenance of physical resources and updating of production facilities have been a difficulty with our project, however.

Conclusion

The Videodisc Research Group has found that it is possible to develop worthwhile videodisc projects in a university setting. Since May of 1985, the group has completed two videodisc projects, completed production and nearly all of the programming on two additional disc projects and is in the design phase of a fifth videodisc. The group has begun to publish working papers related to all phases of videodisc development and has made presentations at regional and national meetings.

A strength of designing and producing videodiscs in a university setting is the research expertise and motivation that is present. University development projects can build on strengths such as varied human and physical resources, but must overcome budgetary and bureaucratic limitations.

We believe that universities can be effective designers and producers of interactive videodiscs; they also provide unique laboratories for the use and evaluation of videodisc programs.